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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/600,701

06/23/2003

Richard Newton Hill JR.

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7590 01/22/2008
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EXAMINER

FREAY, CHARLES GRANT

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

01/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

CT

Office Action Summary

Application No.

10/600,701

Applicant(s)

HILL, RICHARD NEWTON

Examiner

Charles G. Freay

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 45-58 is/are pending in the application.
- 4a) Of the above claim(s) 47, 53-56 and 58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 45, 46, 48-52 and 57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the Amendment of November 13, 2007. In making the below rejections and/or objections the examiner has considered and addressed each of the applicant's arguments.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 45, 46, 48-52 and 57 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The original disclosure does not teach of there being more than one inlet check valve or more than one outlet check valve.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 45, 48-51 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen (USPN 5,435,134) in view of Anderson (USPN 4,442,887).

Nielsen discloses a wave and tide actuated submersible pump (Fig. 1) for use in an open body of water (col. 3 line 13) having a cylinder (3) with an open top end and a closed bottom end (2) which can be secured to the sea bottom. An inlet check valve (22), an outlet check valve (31) and a weighted piston (4). There is a buoy (6) connected to the piston by a flexible connector (5). The piston moves on the upstroke of the cycle by the wave lifting the piston and moves downwardly under its own weight (col. 5 lines 40-46). There is a mechanism (41) for restricting the upward stroke of the piston within the pump cylinder. Nielsen does not disclose a lifting eye or a mooring ring on the buoy, a mooring guide and wear ring mounted to the top of the cylinder or the water being delivered to a reservoir. Anderson discloses a wave actuated piston pump having a buoy (68) with a lifting eye, a mooring ring, and a mooring ring guide and wear ring (52, 54) mounted at the top of a cylinder. The pump delivers to a reservoir (10, 20). At the time of the invention it would have been obvious to one of ordinary skill in the art to use a buoy with a mooring ring, a lifting eye, a guide and wear ring as disclosed in Anderson in the Nielsen device in order to provide a simple means of attaching the buoy to the piston and securing the unit in place on the sea floor. It also would have been obvious to deliver the water to a reservoir as taught by Anderson in order to provide a mechanism for the pumped water to be used later.

The examiner notes with regards to claim 57 that the recitation of raising sea animals is a future intended use of the pumped water and does not further limit the claimed pump structure.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen in view of Anderson as applied to claim 45 above, and further in view of EP 0 875 257 (hereinafter (EP '257)).

As set forth above Nielsen in view of Anderson discloses the invention substantially as claimed but does not disclose that the restricting means are plural pins. EP '257 discloses a reciprocating pump having a pin (48) for restricting piston movement. At the time of the invention it would have been obvious to substitute a pin for the restrictor (41) in Nielsen as a simple means of keeping the piston ion the cylinder and it also would have been obvious to use plural pins in order to provide a provide the necessary resistance and prevent overload of a single pin.

Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen in view of Anderson as applied to claim 45 above, and further in view of Parker (USPN 5,105,094).

As set forth above Nielsen in view of Anderson discloses the invention substantially as claimed but does not disclose a vent hole and valve in the piston. Parker discloses in figures 4, 5 and 12 a reciprocating piston used in submerged waters with a vent hole and valve (86). At the time of the invention it would have been

obvious to one of ordinary skill in the art to provide such a vent hole in the piston of Nielsen in order to prevent the inefficient operation of the piston within the cylinder due to air being present.

Response to Arguments

Applicant's arguments filed November 13, 2007 have been fully considered but they are not persuasive. The applicant makes a number of arguments with respect to Nielsen (see items 1-7 on pages 7 and 8 of the applicants response). The first three of these arguments set forth that Nielsen uses springs on the inlet check valves to create a negative pressure in the pump chamber and generate a boiling of the sea water, and that the work of the Nielsen pump is to drive a generator.

While the Nielsen reference may show these limitations and perform such functions the claims of the instant invention do not structurally differentiate the instant invention from the Nielsen pump. For example, the Nielsen reference does disclose inlet check valves through which water from the sea flows. The fact that the water first flows through the generator does not differentiate the claimed invention from the Nielsen reference. Further, nothing in the instant invention limits the claimed invention to a point which would prohibit the boiling effect created in the generator portion of the pump.

With regards to the applicants argument that Nielsen does no work on the down stroke other than the "to open the check valve to allow the water to flow back into the sea". This argument is not convincing. The definition of pumping is to move a fluid from one location to another. Thus the fact that the up and down movement of the Nielsen

piston , caused by the action of the buoy and the weight of the piston, causes fluid to flow in the generator chamber, through the inlet check valve and then out through the outlet check valve is pumping as claimed by the applicant. Nielsen discloses the claimed structural features of the applicant's invention.

With regards to arguments 5-7 the examiner makes the following response to the applicant's argument. With respect to argument 5 just because Nielsen in addition to allowing water to flow into the cylinder on it's upstroke also allows water to flow through a generator does not invalidate the reference. Nielsen still teaches allowing water to flow into its cylinder on the upstroke. The argument with regards to the ambient pressure is not convincing because this limitation is not in the claims. With regards to argument 6 the examiner notes the response to argument 4 above. The Nielsen pump does use the weight of the piston to create a positive pressure (the pressure in the pump chamber must be greater than the pressure in the surrounding water for the outlet valve to open). With respect to the applicant's argument number 7 the examiner notes that the applicants claims require an inlet and an outlet check valve. Check valves can have springs or not have springs therefore the applicant's claims have a scope including valves with a spring and the Nielsen devise reads on the invention.

The applicant also makes seven arguments with regards to Andersen. The examiner notes that with regards to arguments 1 and 3-7 the features being argued are taught by the Nielsen base reference. Anderson is being used for its teaching of the mooring ring, the guide and the wear ring. In response to applicant's arguments against

the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

With regards to the applicants second argument that Anderson does not disclose the mooring ring guide and wear ring and instead shows a solid shaft with packing and O-ring the examiner disagrees. Reference should be made to items (52, 54) and the attachment between the flexible connector (70) and the buoy (68).

The applicant notes six features of his invention on pages 9 and 10 of the response but these features do not negate the fact that the Nielson and Anderson references make obvious the claimed invention.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning with respect to EP ('257), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In response to applicant's argument that the EP ('257) is nonanalogous art, it has been held that a prior art reference must either be in the field of

applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the reference deals with the extraction of a reciprocating pumping member too far from a cylinder and a means for preventing the pumping member from exiting the cylinder. Both the claimed invention and the Nielsen base reference are also directed to this feature.

On pages 11 and 12 the applicant set forth a number of points relating to what he feels are the advantages and uniqueness of his invention. Most of this section reiterates points made during the applicant's arguments. As set forth above, however, the cited references make obvious the claimed invention

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Application/Control Number:
10/600,701
Art Unit: 3746

Page 9

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

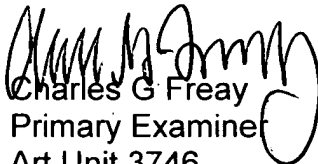
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles G. Freay whose telephone number is 571-272-4827. The examiner can normally be reached on Monday through Friday 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/600,701
Art Unit: 3746

Page 10

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Charles G. Freay
Primary Examiner
Art Unit 3746

CGF
January 16, 2008